Appl. No. 10/625,812
Amdt. dated December 4, 2006
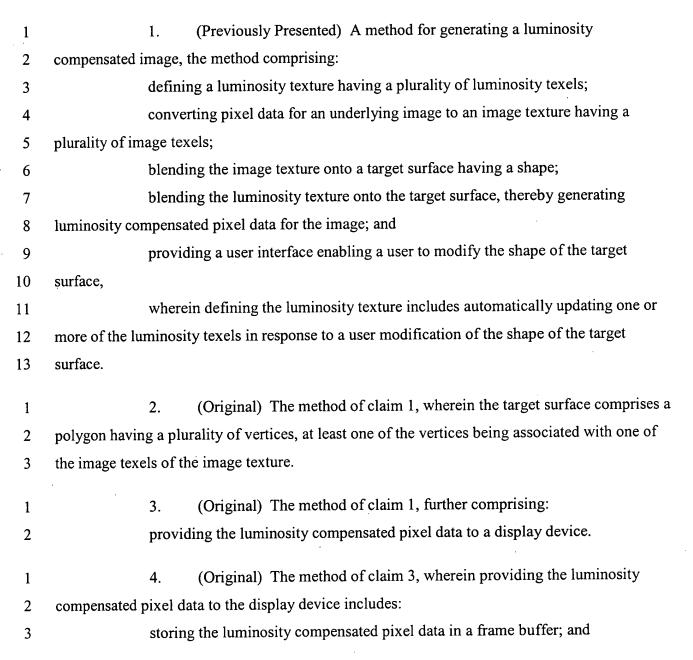Reply to Office Action of August 4, 2006

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1   1.   (Previously Presented) A method for generating a luminosity
2   compensated image, the method comprising:
3   defining a luminosity texture having a plurality of luminosity texels;
4   converting pixel data for an underlying image to an image texture having a
5   plurality of image texels;
6   blending the image texture onto a target surface having a shape;
7   blending the luminosity texture onto the target surface, thereby generating
8   luminosity compensated pixel data for the image; and
9   providing a user interface enabling a user to modify the shape of the target
10 surface,
11   wherein defining the luminosity texture includes automatically updating one or
12 more of the luminosity texels in response to a user modification of the shape of the target
13 surface.

1   2.   (Original) The method of claim 1, wherein the target surface comprises a
2   polygon having a plurality of vertices, at least one of the vertices being associated with one of
3   the image texels of the image texture.

1   3.   (Original) The method of claim 1, further comprising:
2   providing the luminosity compensated pixel data to a display device.

1   4.   (Original) The method of claim 3, wherein providing the luminosity
2   compensated pixel data to the display device includes:
3   storing the luminosity compensated pixel data in a frame buffer; and

Appl. No. 10/625,812
Amdt. dated December 4, 2006
Reply to Office Action of August 4, 2006

PATENT

4   subsequently scanning out the frame buffer data, thereby providing data to the

5   display device.

1   5.   (Original) The method of claim 1, wherein each luminosity texel includes

2   a scaling factor.

1   6.   (Original) The method of claim 5, wherein blending the luminosity

2   texture onto the target surface includes:

3   selecting one of the luminosity texels; and

4   multiplying a pixel value from the target surface by the scaling factor of the

5   selected luminosity texel.

1   7.   (Original) The method of claim 5, wherein the scaling factors define a

2   luminosity gradient to be applied across an area of the image.

8 - 9.   (Canceled)

1   10.   (Previously Presented) The method of claim 1, wherein automatically

2   updating one or more of the luminosity texels includes computing a luminosity scaling factor

3   based on a distance to a location on the target surface that maps to the texel.

1   11.   (Original) The method of claim 10, wherein the distance is determined

2   from a depth coordinate of the location on the target surface.

1   12.   (Original) The method of claim 1, wherein the luminosity texture includes

2   a low luminosity region.

1   13.   (Original) The method of claim 12, wherein the low luminosity region

2   corresponds to an overlap region in an image to be displayed using a plurality of display devices

3   configured to display overlapping image elements.

1   14.   (Original) The method of claim 1, wherein the luminosity texture includes

2   dark texels for forming a visible pattern superimposed on the underlying image.

Appl. No. 10/625,812
Amdt. dated December 4, 2006
Reply to Office Action of August 4, 2006

PATENT

1   15.   (Currently Amended) The method of claim 14, wherein the visible pattern

2   corresponds to a <u>textual</u> message readable by a user.

1   16.   (Original) The method of claim 1, further comprising:

2   providing a user interface enabling a user to define the luminosity texture.

1   17.   (Original) The method of claim 16, wherein the user interface further

2   enables the user to save the luminosity texture to a file.

1   18.   (Original) The method of claim 17, wherein the user interface further

2   enables the user to select a previously saved luminosity texture file to be applied.

1   19.   (Original) The method of claim 16, wherein the user interface further

2   enables the user to modify the luminosity texture.

1   20.   (Original) The method of claim 1, wherein each luminosity texel includes

2   an independent scaling factor for each of a plurality of color components.

1   21.   (Original) The method of claim 20, wherein the plurality of color

2   components includes a red component, a green component, and a blue component.

1   22.   (Previously Presented) A graphics processing system comprising:

2   a texture generation module configured to convert pixel data for an underlying

3   image to an image texture having a plurality of image texels;

4   a texture memory configured to store the underlying image texture and a

5   luminosity texture having a plurality of luminosity texels;

6   a multistage texture blending module configured to blend each of the image

7   texture and the luminosity texture onto a target surface having a shape, thereby generating

8   luminosity-compensated pixel data for an image;

9   a user interface module configured to receive a user instruction modifying the

10   shape of the target surface; and

Appl. No. 10/625,812
Amdt. dated December 4, 2006
Reply to Office Action of August 4, 2006

PATENT

11   a luminosity compensation module configured to automatically update the

12   luminosity texture stored in the texture memory in response to the user instruction modifying the

13   shape of the target surface.

1   23.   (Original) The graphics processing system of claim 22, wherein the target

2   surface comprises a polygon having a plurality of vertices, at least one of the vertices being

3   associated with a texture coordinate of the image texture.

1   24.   (Original) The graphics processing system of claim 22, further

2   comprising a frame buffer configured to store the luminosity-compensated pixel data.

1   25.   (Original) The graphics processing system of claim 22, further

2   comprising scanout control logic configured to provide the luminosity-compensated pixel data to

3   a display device.

1   26.   (Original) The graphics processing system of claim 22, wherein each

2   luminosity texel includes a scaling factor.

27 - 28. (Canceled)

1   29.   (Previously Presented) The graphics processing system of claim 22,

2   wherein the luminosity compensation module is further configured to compute an updated value

3   for a texel of the luminosity texture based on a distance to a location on the target surface that

4   maps to the texel.

1   30.   (Original) The graphics processing system of claim 29, wherein the

2   distance is determined from a depth coordinate of the location on the target surface.

1   31.   (Original) The graphics processing system of claim 22, wherein the

2   luminosity texture includes a low luminosity region.

Appl. No. 10/625,812
Amdt. dated December 4, 2006
Reply to Office Action of August 4, 2006

PATENT

1   32.   (Original) The graphics processing system of claim 31, wherein the low

2   luminosity region corresponds to an overlap region in an image to be displayed using a plurality

3   of display devices configured to display overlapping image elements.

1   33.   (Original) The graphics processing system of claim 22, wherein the

2   luminosity texture includes darkened texels forming a visible pattern.

1   34.   (Currently Amended) The graphics processing system of claim 33,

2   wherein the pattern corresponds to a textual message readable by a user.

1   35.   (Original) The graphics processing system of claim 22, further

2   comprising a user interface module configured to enable a user to define the luminosity texture.

1   36.   (Previously Presented) A computer program product comprising:

2   a computer readable medium encoded with program code, the program code

3   including:

4   program code for defining a luminosity texture that includes a scaling

5   factor for each of a plurality of luminosity texels;

6   program code for converting pixel color values of an underlying image to

7   an image texture having a plurality of image texels;

8   program code for blending the image texture onto a surface having a

9   shape;

10   program code for blending the luminosity texture onto the target surface,

11   thereby generating luminosity compensated pixel data for the image;

12   program code for providing a user interface enabling a user to modify the

13   shape of the target surface; and

14   program code for updating the scaling factor for each luminosity texel

15   based on the modified shape of the target surface.

Appl. No. 10/625,812
Amdt. dated December 4, 2006
Reply to Office Action of August 4, 2006

PATENT

1   37.   (Original) The computer program product of claim 36, wherein the

2   computer readable medium comprises a magnetic storage medium encoded with the program

3   code.

1   38.   (Original) The computer program product of claim 36, wherein the

2   computer readable medium comprises an optical storage medium encoded with the program

3   code.

1   39.   (Original) The computer program product of claim 36, wherein the

2   computer readable medium comprises a carrier signal encoded with the program code and

3   adapted for transmission via a network.

1   40.   (Original) The computer program product of claim 36, wherein the

2   program code further includes program code for providing a user interface enabling a user to

3   define the luminosity texture.

1   41 - 42. (Canceled)

1   43.   (New) The method of claim 2, wherein the user interface comprises a

2   handle for repositioning a vertex of the polygon.

1   44.   (New) The method of claim 1, wherein the updated luminosity texels

2   provide a second image with a more uniform brightness from one edge of the second image to

3   another edge of the second image.

1   45.   (New) The graphics processing system of claim 23, wherein the user

2   interface module is configured to receive a repositioning of at least one vertex of the polygon.

1   46.   (New) The graphics processing system of claim 22, wherein the updated

2   luminosity texture provides a second image with a more uniform brightness from one edge of the

3   second image to another edge of the second image.

Appl. No. 10/625,812
Amdt. dated December 4, 2006
Reply to Office Action of August 4, 2006

PATENT

47.   (New) The computer program product of claim 36, wherein the updated luminosity texels provide a second image with a more uniform brightness from one edge of the second image to another edge of the second image.